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Gravis UltraSound MIDIFIER (MIDFIR76.ZIP)
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Midifier is a program written as a lab project to prove a concept. It is not inteneded to be a Gravis product but rather a utility. We have used it in house for a few months and decided to release it to you (the public) as an XMas '93 gift. Enjoy.

------Midifier documentation-----

Midifier is a program which will turn your Advanced Gravis UltraSound card into a fun-to-use general midi sound module. Midifier will let you play music using an external MIDI keyboard hooked up to a UltraSound MIDI adapter.

Once midifier is started, the display should look like the following:

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The top half of the screen is showing the current parameters for MIDI channel 1. When you use the MIDI keyboard to adjust parameters such as volume, expression, pan, mod wheel, or pitch bend, the screen will get updated to show you the new values. You can also adjust the MIDI parameters by using the mouse or keyboard.

Midifier won't actually make any sounds until you load instruments. You can load instruments using one of several methods:

 Click on the drop-down-menu next to the label "Program:" and a menu will appear with a list of instruments. The screen should look like the following:

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You can either type the name of the instrument you want, or use the arrow keys or page up and page down keys to find an instrument. Or, you can hold down the first mouse button and slide the mouse upwards or downwards beyond the top or bottom of the listbox to scroll. When the instrument you want to load is highlighted, press return, or click with the mouse.

The screen should looke something like the following:

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The Honkytonk piano is loaded.

- 2) If you have a General MIDI keyboard, you can send choose the instrument from your keyboard.
- The Edit Patch Selection menu can be used to load group patch selections. This will be shown later.

The bottom half of the screen lets you manage patches that are loaded. You can select one instrument out of the list of loaded instruments by double clicking on the insturment name in the listbox. A selected instrument can be unloaded by pressing the "Unload Patch" button.

If you get any "Hung notes," you can turn all playing notes off by pressing the "All Notes Off" button.

If you have a MIDI keyboard with aftertouch, you can add a vibrato effect to a playing note by pressing the keys a little harder than normal after starting the note.

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The File menu can be used to save or load configurations. Anything that you may have modified with the "Edit Patch Selections" menu can be saved and restored with the configuration files. You can also use the File menu to exit the program. Esc works too.

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The Edit Program selection menu lets you do the following:

- * Split the keyboard among multiple instruments
- * Play multiple instruments simultaneous
- * Play different instruments depending on how hard you hit the keys
- * adjust instrument tuning
- * add quick-and-dirty chorusing effect

Split	patch	selection	by: (*) No	ote () '	Velocity			
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() ()	0 3000	0 127 00000	synpiano	002	#	0 0 000000	0 1024 00000000	[X]	
() ()	0 3000	0 127 00000	honky	003	#	0 0 000000	0 1030 00000000	[X]	
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The Respond to MIDI program change button toggles between using the normal instrument selection, or the cool-neato instrument selection shown above.

The keyboard can be split either by note (pitch) or velocity (volume). Each row can be used to select an instrument. When a midi note is hit that falls in the range of the first column and second column, the note will be heard. The offset can be used to adjust the pitch of a note by semitones. There are 12 semitiones in an octave. The tune column can be used to detune a patch. If 1024 is used, no detune will occur. This number will be multiplied by the frequency, and then divided by 1024. So, 1085 will be one semitone, 1149 will be two, 1217 will be three, etc. A simple chorusing effect can be creating by choosing numbers close to 1024, such as 1020, 1024, 1028, 1032, etc...

A row can be turned off by clicking on the Use column until the X disappears.

Other input methods: If you are trying to set a range where a Piano should be heard (between c2 and b3), click in row one in the "Use Patch" column, and select acpiano. Now, click in the first column to set the lower range. Press the C2 note on your MIDI keyboard, and a 36 should appear in the first column. Now press the tab key to advance to the next column, or click on the "To" column with the mouse. Press the B3 note on your MIDI keyboard, and a 59 will appear in the "To" column. Now, Midifier is set up to listen to only the notes between C2 and B3. However, the offset column is still zero, and a MIDI note of zero is below you hearing range. You should set up the offset so that it matches the low range. Click your mouse in the offset field and press the C2 key, or type in 36. To test out the setup, click on a field that won't be affected by a "note-on" MIDI event. Tab to the "Use" column, it is a safe place to be while playing around. Now try playing your MIDI keyboard, and you'll notice that the piano only plays in the range from C2 to B3. Using the same method, you can assign other rows to different instruments. If the numbers in the first and second columns overlap between rows, you can play multiple instruments simultaneously.

When you find an instrument selection that pleases you, click on the OK button.

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Program #@Edit @# Channel #
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♦ Volume: #������ Use mod wheel on your keyboard to change:

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The "Edit Mod Wheel Action..." menu can be used to change the effect of the mod wheel on your MIDI keyboard. Normally the mod wheel will activate the frequency modulation for an instrument (vibrato). Expression can be used to change the current volume for an instrument. Pan can be used to move the instrument between the left and right speakers.

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Another toy-feature of Midifier is the custom patch feature. If you add a microphone to the second input jack from the bottom of your UltraSound card, you can create your own toy patch. Just click on the record button while making noise into the microphone. When you are done, press enter, space, or click the mouse button on the stop button. Now start playing on your MIDI keyboard. If you want to turn the looping off, press the loop button. If you want to edit the loop points, move the start loop or end loop sliders. You will not be able to create real fancy patches with this feature. If you would like to create real patches, look for one of the many patch editors available from Advanced Gravis, or public networks such as Internet, Compuserve, Genie, America Online, etc.

More features will be added to midifier at various times in the next 30 or 40 years, so keep looking.

--Mike Leibow Forte Technologies